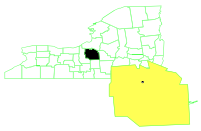
ONONDAGA LAKE
NEW YORK
EPA ID# NYD986913580



EPA REGION 2
CONGRESSIONAL DIST. 25
Onondaga County
City of Syracuse and Towns of Salina, Geddes, and Camilus

Site Description

The Onondaga Lake site includes the Lake itself, seven major and other minor tributaries, and upland sources of contamination to the Lake (sub-sites). The Lake has an areal extent of about 4.5 square miles, with a drainage basin of approximately 233 square miles. Effluent from the Metropolitan Syracuse Sewage Treatment Plant discharges into the southeastern end of the Lake. The Lake flows to the northwest into the Seneca River. Historically, industrial processing plants and municipal wastewater treatment plants routinely discharged their wastes into the Lake. The availability of salt and limestone led to the location of the Solvay Process Company, the predecessor to AlliedSignal, Inc.(Honeywell International, Inc. is a successor corporation of the former AlliedSignal, Inc.), on the west shore of the Lake for the production of soda ash. Today, vast areas on the western shoreline are occupied by the "Solvay waste beds," which contain by-products of the company's soda ash production. In 1946, AlliedSignal initiated a mercury cell process which produced chlorine, sodium hydroxide, and potassium hydroxide at its facility on Willis Avenue, and later expanded to include a facility on Bridge Street. Waste streams containing mercury and other heavy metals were discharged by these facilities. Honeywell's Semet Residue Ponds, which contain volatile organic compounds (VOCs) from facilities associated with the production of benzene and chlorinated benzene, are another source of contamination to the Lake. Other industrial and manufacturing facilities are also located along the shore or tributaries to the Lake and may be sources of contamination to the Lake. Onondaga Lake adjoins park lands owned by Onondaga County. Public fishing was banned from the Lake in 1970, but the Lake was opened to allow catch-and-release fishing in 1986.

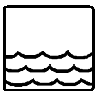
Site Responsibility: The site is being addressed through federal, state, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 05/10/93
Final Date: 12/16/94

Threats and Contaminants

Surface water is contaminated with mercury. Sediments are contaminated with polychlorinated biphenyls (PCBs); pesticides; creosotes; heavy metals, including lead, cobalt, and mercury; polycyclic aromatic hydrocarbons; and VOCs. The ground water at the Willis Avenue Plant is also contaminated. Several species of fish native to the Lake have high concentrations of mercury. Contact with or ingestion of contaminated ground water, surface water, or sediments could pose a health threat.

Cleanup Approach



This site is being addressed in two stages: interim remedial measures (IRMs) and long-term remedial actions focusing on the clean up of the sub-sites.

Response Action Status

Interim Remedial Measures: Chlorobenzene is presently being removed from wells at the Willis Avenue sub-site as an IRM. In March 2000, an IRM at the LCP-Bridge Street sub-site to remove portions of the on-site sewers, which were releasing mercury-contaminated water into the West Flume and East Ditch, and to plug the downgradient ends of these sewers was completed. Also, at the LCP-Bridge Street sub-site, IRMs involving the demolition of most of the on-site structures and the Diaphragm and Mercury Cell building were completed in September 2001. The Diaphragm and Mercury Cell building demolition IRM consisted, in part, of removing and recycling elemental mercury from cells inside the Mercury Cell building, followed by its decontamination and demolition. IRMs have also been undertaken to upgrade the collection of chlorobenzene present underground from the Willis Avenue site, clean the I-690 storm drainage system located downgradient of the Semet Tar Ponds and Willis Avenues sites, identify and investigate seeps in and around the berms which enclose the Semet Tar Ponds, prevent human exposure to the seeps, and provide engineering details as to the structural integrity of the berms. Also, in April 2002, Honeywell signed orders to design and construct a Semet/Willis lakeshore barrier wall and ground water collection and treatment system and to conduct an underdrain isolation pilot study for the I-690 storm drainage system. The I-690 Storm Drain IRM was conducted in June-July 2003. A work plan to conduct a second phase of the pilot study is currently under review.

Entire Site: Much of the investigative and remedial work at the various sub-sites is being performed by the potentially responsible parties (PRPs), pursuant to enforcement agreements between the individual PRPs and the State. EPA has provided approximately $16.5 million to the State, through a cooperative agreement, for the performance of remedial investigation and feasibility study (RI/FS) activities, coordination and management of the independent sub-site studies, oversight of PRP-conducted activities, implementation of a site-wide citizen participation program, creation and maintenance of a site-wide data base, and establishment of a comprehensive enforcement program.

In 1998, EPA concurred with the remedy selected in a Record of Decision (ROD) issued by New York State for the Ley Creek PCB Dredgings sub-site. The remedy (excavation of PCB-contaminated soils,

on-site disposal under a cap, and off-site treatment/disposal), which commenced in December 1999, was completed in November 2000.

In September 2000, a ROD was issued, selecting a remedy for the LCP Bridge Street sub-site. The selected remedy includes a combination of excavation and on- and off-site treatment/disposal of contaminated soils and sediments, and the construction of a cap, slurry wall, and ground water extraction and on-site treatment system. In March 2002, New York State signed a Consent Order with Honeywell International, Inc. for the performance of the design and construction of the selected remedy. Accelerated remedial activities, including excavation and relocation of the brine mud piles, excavation and off-site disposal of PCB-contaminated soils, and overpacking and off-site disposal of 6 deteriorated drums, was conducted in November 2003. It is anticipated that the design will be completed in Spring 2004. In addition, a Consent Order to investigate ground water contamination for a second operable unit of the LCP Bridge Street subsite was signed by the Honeywell International, Inc. and New York State in May 2002. It is anticipated that this RI/FS will be completed in late 2005.

In March 2002, a ROD was issued for the Semet Residue Ponds sub-site. The selected remedy includes the excavation of the Semet pond residue and on-site processing of the residue into benzene, light oil, and a soft tar product to be used in manufacture of driveway sealer. It also includes ground water collection and on-site treatment. New York State and EPA have determined that a modification of the remedy, which would allow for the residue to be utilized as an alternative fuel, may be evaluated pursuant to a Consent Order being negotiated by New York State and the Honeywell International, Inc.

A Proposed Plan identifying a preferred remedy for the Salina Town Landfill sub-site was released for public comment in January 2003. The preferred remedy called for the conveyance of the collected leachate and ground water via the sanitary sewer system to the Onondaga County waste water treatment plant. During the public comment period, Onondaga County indicated that it had a policy not to accept wastewater from inactive hazardous waste sites. After several months of negotiations, the Town of Salina was not successful in convincing the County to make an exception to the County's policy. It is anticipated that a remedy identifying an alternative off-site treatment facility will be selected by March 2004.

RI/FSs are presently being performed by the PRPs at nine sub-sites—Geddes Brook/Ninemile Creek, General Motors: Inland Fisher Guide, Harbor Brook/Wastebed B, Maestri 2, Niagara Mohawk (Erie Boulevard), Niagara Mohawk (Hiawatha Boulevard), Onondaga Lake Bottoms, Willis Avenue, and Willis Ave Ballfield. It is anticipated that the RI/FSs will be completed at all of these sub-sites by 2005.

Assessments are currently being performed at a number of potential sub-sites to determine whether they contributed contamination to or threaten to contribute contamination to Onondaga Lake.

Administrative Consent Orders were signed in April 2002 between the Honeywell International, Inc. and New York State to perform several IRMs related to the investigation and cleanup of the Onondaga Lake site, including removal of sediments and floodplain soils from Geddes Brook (a tributary to Ninemile Creek which discharges into the Lake) and sediments from the East Flume (an excavated drainage way discharging into the Lake with the upper portion reconstructed to serve as a holding pond). Geddes Brook sediment and floodplain soil is contaminated with mercury, methylmercury, polyaromatic hydrocarbons (PAHs), and dioxins/furans. East Flume sediments contain metals, including mercury, semi-volatile organic compounds (including chlorinated benzenes, naphthalene and other PAH compounds), benzene, ethyl benzene, toluene, xylene, chlorobenzene, and dioxins/furans.

Site Facts: In early 1992, AlliedSignal, Inc. (predecessor to Honeywell International, Inc.) entered into a Consent Decree with New York State, requiring the company to perform an RI/FS to investigate the nature, extent, and effect of the contaminants it contributed to the Lake and to evaluate remedial

alternatives. The State has entered into a number of consent orders with Honeywell International, Inc. and other PRPs for the performance of investigations at various sub-sites. A comprehensive enforcement program has been initiated to identify other PRPs who may have played a role in the contamination of the Lake.

Cleanup Progress

(Studies Underway; Initial Remedial Measures Completed; Initial Remedial Measures Underway; and Remediation Underway)

EPA and New York State have determined that the site poses no immediate threat to human health or the environment while studies are being performed. To date, approximately 22,359 gallons of chlorobenzene has been removed from wells at the Willis Avenue sub-site.

Site Repositories

Atlantic States Legal Foundation, 658 West Onondaga Street, Syracuse, NY 13204

Onondaga County Public Library, Syracuse Branch at the Galleries, 447 South Salina Street, Syracuse, NY 13202

New York State Department of Environmental Conservation, Region 7 Office, 615 Erie Blvd., West, Syracuse, NY 13204

New York State Department of Environmental Conservation, 625 Broadway, Albany, NY 12233